

IN THE CLAIMS:

Claims 1, 2, 4-7, 12-18 are amended. New claims 20-22 are added. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Currently Amended) A composition containing human TGF α "hTGF α ", wherein said hTGF α comprises the amino acid sequence of SEQ ID NO 2 or its combination with other EGF-R ligands, coupled with a carrier protein by genetic cloning before expression of said proteins or by chemical conjugation after expression of said proteins, wherein said composition contains an adjuvant, wherein said composition is able to produce a specific immune response in a subject against said hTGF α , and wherein said carrier protein is P64k.
2. (Currently Amended) The composition according to claim 1, ~~containing~~ wherein the hTGF α is recombinant human TGF α .
3. (Canceled).
4. (Previously Presented) The composition according to claim 1 that contains a recombinant fusion protein between hTGF α and P64k wherein a nucleic acid sequence encoding said fusion protein is cloned in an expression vector system and expressed in mammalian cells, bacteria or yeast.
5. (Currently Amended) The composition according to claim ~~[[1]] 4, that contains a recombinant fusion protein between hTGF α and P64k~~ wherein ~~[[a]]~~ the nucleic acid sequence encoding said fusion protein is cloned in an expression vector of bacteria and expressed in E. coli.

6. (Currently Amended) The composition according to claim ~~[[1]]~~ 4, ~~that contains a recombinant fusion protein between hTGF α and P64k~~ wherein ~~[[a]]~~ the nucleic acid sequence encoding said fusion protein is cloned in an expression vector of bacteria that presents a genetic sequence coding for six histidines in the N-terminal end of P64k and is expressed in E. coli.

7. (Currently Amended) The composition according to claim 1, wherein hTGF α , and P64k are coupled by a chemical method.

8-11. (Canceled).

12. (Currently Amended) The composition according to claim 1, wherein the adjuvant is incomplete adjuvant of Freund.

13. (Currently Amended) The composition according to claim 1, wherein the adjuvant is Al(OH)₃.

14. (Withdrawn and Currently Amended) A method of immunization comprising, ~~administration of~~ administering the composition according to claim 1 to the subject so as to achieve, ~~wherein administration of the composition achieves~~ specific antibodies against hTGF α .

15. (Withdrawn and Currently Amended) The method according to claim 14, wherein anti-hTGF α antibodies are generated, which anti-hTGF α antibodies are capable of inhibiting binding of TGF α to its receptor ~~in an~~ in vitro experiment.

16. (Withdrawn and Currently Amended) The method according to claim 14, further comprising generating ~~wherein~~ anti-hEGF antibodies ~~are generated~~.

17. (Withdrawn) The method according to claim 14, wherein anti-hTGF α antibodies are generated, which anti-hTGF α antibodies are able to recognize TGF α in human tumor biopsies.

18. (Withdrawn and Currently Amended) A method of treating a malignant disease expressing hTGF α and other ligands of EGF-R, ~~wherein the malignant disease is selected from among the group consisting of epidermoide~~ breast carcinomas, prostate cancers, gastric cancers, and ovary epithelial cancer in a subject, ~~which cancer expresses hTGF α and other ligands of EGF-R~~, comprising administering the composition of claim 1 to the subject.

19. (Canceled).

20. (New) A composition comprising the amino acid sequence of SEQ ID NO 2 coupled to P64k, together with an adjuvant, wherein the composition is able to produce a specific immune response in a subject against hTGF α .

21. (New) The composition according to claim 20, wherein the concentration of hTGF α is between about 5 μ g to 1000 μ g per dose.

22. (New) The composition according to claim 21, wherein the concentration of hTGF α is 50 μ g per dose.

23. (New) The composition according to claim 20, wherein the ratio of the adjuvant to the hTGF α is about 3 to 1 by weight.

24. (New) The composition according to claim 20, wherein the ratio of the adjuvant to the hTGF α is about 40 to 1 by weight.